

Application Number 10/626,212
Amendment dated 17 May 2005
Reply to Office Action of 8 April 2005

Remarks

No claims have been cancelled or added in this Response. Therefore, Claims 2, 4–6, 8–10, 12, 14, 15, and 17–19 remain pending in this application. Claims 6, 9, 10, 18 and 19 are independent. Claims 2, 4, 5 and 8 depend from independent Claim 6. Claims 12, 14, 15 and 17 depend from independent Claim 19.

Claim Rejections Under 35 U.S.C. § 102 based on U.S. Patent 6,503,330.

Claims 2, 4, 5, 8–10, 12, 14, 15 and 17 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,503,330 ("Sneh '330"). Claims 9 and 10 are independent.

Claims 9 and 10. In contrast to the methods disclosed in Sneh '330, Applicants have amended Claim 9 and 10 to recite, among other things:

wherein exposing incorporates less than 1 atomic % of the products of the plasma at a depth of greater than about 10 Å from the surface

Support for this amendment is found in paragraph [0107] of the originally-filed specification. Sneh '330 does not teach the combination of elements recited in amended Claims 9 or 10. Therefore, Applicants submit that Sneh '330 does not anticipate amended Claims 9 and 10, and respectfully request that these rejections be withdrawn.

Claims 2, 4, 5 and 8. Claims 2, 4, 5 and 8 depend from independent Claim 6, which was not rejected as anticipated by Sneh '330.

Claims 12, 14, 15 and 17. Claims 12, 14, 15 and 17 depend from independent Claim 19, which was not rejected as anticipated by Sneh '330.

Application Number 10/626,212
Amendment dated 17 May 2005
Reply to Office Action of 8 April 2005

Claim Rejections Under 35 U.S.C. § 102 based on U.S. Patent 6,551,399.

Claims 2, 4, 5, 8–10, 12, 14, 15 and 17–19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,551,399 ("Sneh '399"). Claims 9, 10, 18 and 19 are independent.

Claims 9, 10, 18 and 19. In contrast to the methods disclosed in Sneh '399, Applicants have amended each of Claims 9, 10, 18 and 19 recite, among other things:

A method of depositing a film on a surface of a semiconductive material

Sneh '399 does not teach the combination of elements recited in any of amended Claims 9, 10, 18 or 19. Sneh '399 discloses methods for forming metal-insulator-metal capacitors using atomic layer deposition processes (see Sneh '399, 1:11–14). In this process, a metal layer, referred to by Sneh '399 as M1 layer 11, is pretreated to create termination sites (see Sneh '399, Figure 7; 6:30–37). The Examiner continues to interpret and refer to Sneh '399's layer 11 as a semiconductor layer, notwithstanding the fact that Sneh '399 clearly states that M1 layer 11 is a metal layer, which is typically comprised on a metal or metal nitride, including Ta, Ta_xN, Ti, TiN or Al (see Sneh '399, 4:22–26)

Claims 9, 10, 18 and 19 had previously recited "depositing a film on a semiconductor surface". Applicants has amended these claims to recite, among other things, depositing a film on a "surface of a semiconductive material". These amendments, which are fully supported by the originally filed specification, were made in view of the Examiner's interpretation of "semiconductor surface". Applicant respectfully submits that amended Claims 9, 10, 18 and 19 are clearly distinguishable from Sneh '399. In particular, Sneh '399's deposition on the surface of metal layer 11 cannot anticipate these claims. Applicants therefore respectfully request that the rejections to amended Claims 9, 10, 18 and 19 be withdrawn.

Claims 2, 4, 5 and 8. Claims 2, 4, 5 and 8 depend from independent Claim 6, which was not rejected as anticipated by Sneh '399.

Application Number 10/626,212
Amendment dated 17 May 2005
Reply to Office Action of 8 April 2005

Claims 12, 14, 15 and 17. Claims 12, 14, 15 and 17 depend from independent Claim 19, and further define the invention recited in Claim 19. Therefore, Applicants submit that Claims 12, 14, 15 and 17 are allowable over Sneh '399 for the same reasons that Claim 19 is allowable over Sneh '399, in addition to reciting further distinguishing features of particular utility. Thus, Applicants respectfully request that these rejections be withdrawn.

Claim Rejections Under 35 U.S.C. § 103.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sneh '399 in view of Sneh '330. Claim 6 is independent.

In contrast to the methods disclosed in Sneh '399 and Sneh '330, Applicants have amended Claim 6 to recite, among other things:

wherein exposing incorporates less than 1 atomic % of the products of the plasma at a depth of greater than about 10 Å from the surface

Support for this amendment is found in paragraph [0107] of the originally-filed specification. Neither Sneh '399 nor Sneh '330 teaches the combination of elements recited in amended Claim 6. Therefore, Applicants submit that this combination of references does not anticipate amended Claim 6, and respectfully request that this rejection be withdrawn.

Claim Rejections Under 35 U.S.C. § 112.

Claim 6 stands rejected under the second paragraph of 35 U.S.C. § 112 because the element "greater than about 10 Å from the surface" is said to lack antecedent basis in the written specification. This element has been removed from Claim 6, and has been replaced with language that is fully supported by the originally-filed specification, as discussed herein. Therefore, Applicants respectfully request that this rejection be withdrawn.

Conclusion.

In view of the foregoing amendments and remarks, Applicants submit that this application is in condition for allowance, and respectfully request the same. If, however,

Application Number 10/626,212
Amendment dated 17 May 2005
Reply to Office Action of 8 April 2005

some issue remains that the Examiner feels can be addressed by an Examiner's Amendment, the Examiner is cordially invited to call the undersigned for authorization.

Respectfully submitted,

KNOBBE MARTENS OLSON & BEAR LLP

Dated: 17 May 05

By: Kyle Schlueter
Kyle F. Schlueter
Registration No. 54,912
Attorney of Record
Customer No. 20,995
(310) 551-3450

1691973
050305